

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A set of nucleic acids comprising:
a first nucleic acid containing SEQ ID NO:1 or 3, and
a second nucleic acid containing SEQ ID NO:2 or 4,
wherein the first and second nucleic acids are ~~each 18-~~ no shorter than 18 nucleotides and no longer than 40 nucleotides in length and, participate in a polymerase chain reaction, with an Escherichia coli nucleic acid as a template, to generate a nucleic acid ~~containing Escherichia coli open reading frame ECs3459~~ that specifically hybridizes under highly stringent conditions to SEQ ID NO: 5, 6, 7, or 8, or the complement thereof.

2. (Original) The set of nucleic acids of claim 1, wherein the first nucleic acid contains SEQ ID NO:1 and the second nucleic acid contains SEQ ID NO:2.

3. (Previously presented) The set of nucleic acids of claim 2, wherein the first and second nucleic acids are each 18-30 nucleotides in length.

4. (Original) The set of nucleic acids of claim 3, wherein the first nucleic acid is SEQ ID NO:1 and the second nucleic acid is SEQ ID NO:2.

5. (Original) The set of nucleic acids of claim 1, wherein the first nucleic acid contains SEQ ID NO:3 and the second nucleic acid contains SEQ ID NO:4.

6. (Previously presented) The set of nucleic acids of claim 5, wherein the first and second nucleic acids are each 24-32 nucleotides in length.

7. (Original) The set of nucleic acids of claim 6, wherein the first nucleic acid is SEQ ID NO:3 and the second nucleic acid is SEQ ID NO:4.

8. (Currently amended) A nucleic acid obtained from amplification of an Escherichia coli nucleic acid template with an upstream primer containing SEQ ID NO:1 or 3 and a downstream primer containing SEQ ID NO:2 or 4, wherein each primer is no shorter than 18 nucleotides and no longer than 40 nucleotides in length and the amplified nucleic acid contains Escherichia coli open reading frame ECs3459 specifically hybridizes under highly stringent conditions to SEQ ID NO: 5, 6, 7, or 8, or the complement thereof.

9. (Original) The nucleic acid of claim 8, wherein the upstream primer contains SEQ ID NO:1 and the downstream primer contains SEQ ID NO:2.

10. (Original) The nucleic acid of claim 9, wherein each primer is 18-30 nucleotides in length.

11. (Original) The nucleic acid of claim 10, wherein the upstream primer is SEQ ID NO:1 and the downstream primer is SEQ ID NO:2.

12. (Original) The nucleic acid of claim 8, wherein the upstream primer contains SEQ ID NO:3 and the downstream primer contains SEQ ID NO:4.

13. (Original) The nucleic acid of claim 12, wherein each primer is 24-32 nucleotides in length.

14. (Original) The nucleic acid of claim 13, wherein the upstream primer is SEQ ID NO:3 and the downstream primer is SEQ ID NO:4.

15. (Currently amended) A nucleic acid selected from the group consisting of SEQ ID NOs:5-8 and ~~sequences complementary~~ the complete complements thereto.

16-22. (Cancelled).

23. (Original) The nucleic acid of claim 15, wherein said nucleic acid is SEQ ID NO:5.

24. (Original) The nucleic acid of claim 15, wherein said nucleic acid is SEQ ID NO:6.

25. (Original) The nucleic acid of claim 15, wherein said nucleic acid is SEQ ID NO:7.

26. (Original) The nucleic acid of claim 15, wherein said nucleic acid is SEQ ID NO:8.

27. (Withdrawn) A method of detecting Escherichia coli, comprising:
providing a sample having a nucleic acid from an unknown microorganism;
amplifying the nucleic acid with an upstream primer containing SEQ ID NO:1 or 3 and a downstream primer containing SEQ ID NO:2 or 4, each primer being 18-40 nucleotides in length; and
detecting an amplification product;
whereby detection of the amplification product indicates the presence of Escherichia coli.

28. (Withdrawn) The method of claim 27, wherein the upstream primer contains SEQ ID NO:1 and the downstream primer contains SEQ ID NO:2.

29. (Withdrawn) The method of claim 28, wherein each primer is 18-30 nucleotides in length.

30. (Withdrawn) The method of claim 29, wherein the detecting step includes hybridizing the amplification product to a nucleic acid probe that is 26-1000 nucleotides in length and contains a sequence selected from the group consisting of SEQ ID NOs:5-8, or a sequence complementary thereto.

31. (Withdrawn) The method of claim 30, wherein said nucleic acid probe is 26-50 nucleotides in length.

32. (Withdrawn) The method of claim 27, wherein the upstream primer contains SEQ ID NO:3 and the downstream primer contains SEQ ID NO:4.

33. (Withdrawn) The method of claim 32, wherein each primer is 24-32 nucleotides in length.

34. (Withdrawn) The method of claim 33, wherein the detecting step includes hybridizing the amplification product to a nucleic acid probe that is 26-1000 nucleotides in length and contains a sequence selected from the group consisting of SEQ ID NOs:5-8, or a sequence complementary thereto.

35. (Withdrawn) The method of claim 34, wherein said nucleic acid probe is 26-50 nucleotides in length.

36. (Currently amended) The set of nucleic acid of claim 1, further comprising a third nucleic acid that is [[26-]] no shorter than 26 nucleotides and no longer than 1000 nucleotides in length and contains a sequence selected from the group consisting of SEQ ID NOs:5-8, and sequences complementary thereto, wherein the third nucleic acid specifically hybridizes under highly stringent conditions to SEQ ID NO: 5, 6, 7, or 8, or the complete complement thereof.

37. (Currently amended) The nucleic acid of claim 36, wherein the third nucleic acid is [[26-]] at most 500 nucleotides in length.

38. (Currently amended) The nucleic acid of claim 37, wherein the third nucleic acid is [[26-]] at most 200 nucleotides in length.

39. (Currently amended) The nucleic acid of claim 38, wherein the third nucleic acid is [[26-]] at most 50 nucleotides in length.

40. (Previously presented) The nucleic acid of claim 39, wherein the third nucleic acid is SEQ ID NO:5.

41. (Previously presented) The nucleic acid of claim 39, wherein the third nucleic acid is SEQ ID NO:6.

42. (Previously presented) The nucleic acid of claim 39, wherein the third nucleic acid is SEQ ID NO:7.

43. (Previously presented) The nucleic acid of claim 39, wherein the third nucleic acid is SEQ ID NO:8.